

Notice of Allowability

Application No.

09/994,529

Examiner

Shahid Al Alam

Applicant(s)

STERLING ET AL.

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to telephonic interview with Harden E. Stevens on August 29, 2006.
2. ☒ The allowed claim(s) is/are 1-11, 13, 14, 16-18, 20-24 and 30-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 08292006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


SHAHID ALAM
PRIMARY EXAMINER

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Harden E. Stevens, III, Reg. No. 55,649 on August 29, 2006.

The application has been amended as follows:

In the claim:

Please amend claims as follow:

AMENDMENTS TO THE CLAIMS

The listing of claims below replaces all prior versions and listings of claims.

Claim 1. (currently amended) A computer-implemented database system, including:

an exemplar object within the database configured to accept and store a plurality of exemplar cases each including one or more exemplar features, where the exemplar cases each comprise a known problem and a corresponding solution;

a target object within the database configured to accept and store a target case including one or more target features, where the target case comprises an actual problem; and

a comparison object within the database configured to use a user defined function for comparing the target features of the target case with the exemplar features of each of the plurality of exemplar cases producing similarity metrics and based on ~~each comparison~~ the similarity metrics, generating an overall match factor ~~similarity metric~~ for each of the plurality of exemplar cases.

Claim 2. (original) The database system of claim 1 where the exemplar object includes an attribute of a schema; and

the comparison object includes a method of the schema.

Claim 3. (original) The database system of claim 2 where the schema includes a user defined type.

Claim 4. (original) The database system of claim 3 where the user defined type is implemented using an object relational database.

Claim 5. (original) The database system of claim 1 where the target object includes an attribute of a schema.

Claim 6. (original) The database system of claim 5 where the schema includes a user defined type.

Claim 7. (original) The database system of claim 6 where the user defined type is implemented using an object relational database.

Claim 8. (original) The database system of claim 1 where the exemplar object includes a database table; and
the target object includes a database table.

Claim 9. (original) The database system of claim 1 where the comparison object includes a macro.

Claim 10. (original) The database system of claim 1 further including a means of grouping exemplar cases into domains, where the exemplar case may be a member of more than one domain.

Claim 11. (original) The database system of claim 10 further including a user interface allowing the pruning of domains to exclude from comparison with the target case.

Claim 12. (cancel)

Claim 13. (currently amended) The database system of claim 1 ~~[[12]]~~ further including a user interface allowing population of the target features.

Art Unit: 2162

Claim 14. (currently amended) The database system of claim 1 ~~[[12]]~~ further including a user interface allowing population of the exemplar features.

Claim 15. (cancel)

Claim 16. (currently amended) The database system of claim 1 ~~[[15]]~~ where the user defined function calculates ~~[[a]]~~ the similarity metric representing the similarity between the target feature and the exemplar feature.

Claim 17. (original) The database system of claim 16 where the user defined function performs mathematical operations to determine the similarity metric.

Claim 18. (original) The database system of claim 16 where the user defined function, in calculating the similarity metric, determines the relationships between nodes representing the target feature and the exemplar feature in a hierarchical structure.

Claim 19. (cancel)

Claim 20. (currently amended) The database system of claim 16 ~~[[19]]~~ where the user defined function determines the overall match factor by computing similarity metrics by comparing each target feature in the target case with the corresponding exemplar feature in an exemplar case; and
summing the similarity metrics.

Claim 21. (currently amended) The database system of claim 16 ~~[[19]]~~ where ~~the user defined function determines the similarity metrics by comparing each target feature in the target case with the corresponding exemplar feature in the exemplar case;~~

the user defined function creates a weighted similarity metric by multiplying the similarity metrics by a weight associated with that similarity metric; and

the user defined function determines the overall match factor by summing the weighted similarity metrics.

Claim 22. (currently amended) The database system of claim 1 ~~[[15]]~~ where the user defined function indirectly recognizes the similarity between the target and exemplar case.

Claim 23. (currently amended) The database system of claim 1 ~~[[15]]~~ where the user defined function is aware of features which are indicative of a finding; and

the user defined function will recognize that the target case possesses the feature indicative of the finding exemplified by the exemplar case, even when the exemplar case lacks that feature.

Claim 24. (currently amended) The database system of claim 1 [[15]] where the user defined function is aware of features, the lack of which are indicative of a finding; and

the user defined function will recognize that the target case lacks a feature, the lack of which is indicative of the finding exemplified by the exemplar case, even when the exemplar case possesses that feature.

Claim 25. (cancel)

Claim 26. (cancel)

Claim 27. (cancel)

Claim 28. (cancel)

Claim 29. (cancel)

Claim 30. (currently amended) A computer-implemented method for use in implementing a case-based reasoning database function, where the method includes:

accepting a target case including one or more target features for comparison with a plurality of exemplar cases including one or more exemplar features stored in the database, where the target case comprises an actual problem and the exemplar cases each comprise a known problem and a corresponding solution; [[and]]

comparing, within the database using a user defined function, the target features of the target case with the exemplar features of each of the [[a]] plurality of [[the]] ~~exemplar cases stored in the database~~ producing similarity metrics; and

~~generating yielding an overall match factor based on the similarity metrics for each of the plurality of exemplar cases, where the exemplar cases each comprise a known problem and a corresponding solution.~~

Claim 31. (previously amended) A computer-implemented method for implementing a case-based reasoning system within a database, the method including:

accepting information representing a target case, where the target case comprises an actual problem;

accepting weights to apply to a set of respective similarity metrics;

accepting the number of closest matching exemplar cases the user wants to review, where the exemplar cases each comprise a known problem and a corresponding solution;

formulating and executing, within the database, a comparison between the target case and the exemplar cases yielding the similarity metrics for that exemplar case;

deriving an overall match factor for each of the exemplar cases from the similarity metrics, weighed by their weights; and

reporting one or more of the closest matching exemplar cases.

Claim 32. (currently amended) A computer-implemented database system for accessing a database, the database system including:

a massively parallel processing system including
one or more nodes;

a plurality of CPUs, each of the one or more nodes providing access to one or
more CPUs;

a plurality of virtual processes each of the one or more CPUs providing access to
one or more processes;

each process configured to manage data stored in one of a plurality of data-
storage facilities;

a case-based reasoning system including:

an exemplar object within the database configured to accept and store a
plurality of exemplar cases each including one or more exemplar features, such that
[[they]] the exemplar cases are distributed evenly among the data storage facilities and
where the exemplar cases each comprise a known problem and a corresponding
solution;

a target object within the database configured to accept and store a target
case including one or more target features, where the target case comprises an actual
problem; and

a comparison object within the database configured to use a user
defined function for comparing the target features of the target case with the exemplar
features of each of the plurality of exemplar cases producing similarity metrics and
generating an overall match factor for each of the plurality of exemplar cases based on
the similarity metrics.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

The prior art of record either individually or in combination does not teach or fairly suggest limitations of claims 1 – 11, 13 – 14, 16 – 18, 20 – 24 and 30 – 32 (re-numbered as 1 – 24) as originally submitted and as amended are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M.- 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shahid Al Alam
Primary Examiner
Art Unit 2162

30 August 2006